Luigi Palmieri—

The Man Who Made Vesuvius His Pet

By Guy T. Viskniskki.

The recent eruption of Vesuvius, that stood out from all the Matteucci, the intrepid professorge of the Royal observatory Vesuvius's side, about 2800 straight line from the central

has been studying the phe- the famous chimney for ten For more than four decades Luigi Palmieri, occupied the and in that time put his life several eruptions for science's

the scope of his work on Prof. Palmieri modestly wrote unt of the great eruption of

observatory was established in the first instance, at my and afterward with some tance from the Government— studies more assiduous than ably made."

Palmieri who invented and per- of the instruments now used ervatory in the study of the It was Palmieri who first re- the volcano during a great that he might study at close phenomena attendant on the is brief, it was Palmieri who the lines of Vesuvian investi- are being assiduously fol- Matteucci, and it was Palmieri Matteucci, a poor boy, and for the work he so heroically of late.

Matteucci Was Chosen.

really owes his present emi- the circumstance that each of sons bitterly disappointed in not embracing science. It father's desire that his elder son, should be trained up to suc- his Vesuvian work, and when declared for a business career— ding Neapolitan business factor looked to the other boy, Jo- scored him. But it was all the could do to persuade Joseph to me in medicine.

to search beyond his family sor, he finally took up Mat- inate cleverness attracted attention, and trained him so thoroughly that shortly after the master's death, in September, 1895, the pupil found himself in sole charge of the Vesuvian observatory.

But long after he had picked Matteucci, Palmieri endeavored to persuade a nephew, John Palmieri of New York, then on a visit to his native land, to give up his new world ambitions and take up his station in the observatory as assistant. The professor recognized Matteucci's ability, but he was proud of the name of Palmieri, and it was the greatest disappointment of his life that he was not able to induce one of that name to continue the study of Vesuvius where he would leave off when death claimed him. The study of Vesuvius was a consuming passion with him—Vesuvius was his one pet.

When Matteucci became a pupil of Palmieri he was practically homeless, his parents being dead. Palmieri received the boy into his own house and gave him a father's care, as well as a teacher's instruction.

Hemmed in by River of Fire.

Palmieri was 47 when he first established himself on Vesuvius; he was in his 65th year when he deliberately took his life in his hands by sticking to his post throughout the grand eruption of 1872.

The dangers that he ran were multhrice repeated, near the banks of the great river of fire that ran close to the observatory. At three points, and at different times, I observed great balls of black smoke issue from the lava, driven up with continued violence, as if from a crater; through the smoke I frequently observed numerous projectiles thrown up into the air, but I could not say whether with noise or silence, for the noise of the central crater was deafening.

"Each of these little eruptions, which I may call external eruptions, lasted from fifteen to twenty minutes." One occurred particularly close to the observatory, all were seen from Naples, and there "the observatory was justly believed to be in danger."

In order to tell the full story of his study, Palmieri was compelled to speak of these dangers in his account. He failed to mention the fact that the tempests of dust all but suffocated him; in Naples every one was seriously incommoded by the dust clouds. Only to his immediate family did he tell of still other dangers—for example, how he was reduced to living on the leather seats of the observatory chairs, in order to stave off starvation.

Science's Triumph Over Fear.

Though violent death in several of its most horrible forms threatened him time and again, he did not once forget that he was on the volcano for scientific purposes.

The thermometer in the observatory rose as high as 130 degrees Fahrenheit, the window glass was cracked by the heat or broken by scoriae, yet he so minutely observed the prenomenon of the external explosions that he was able to report that they "terminated without leaving little cones or craters, the lava, in its impetuosity, carrying every trace away."

When his observatory violently rocked to and fro he critically observed that "the oscillations were chiefly undulatory, from N. E. to S. W."

While asnes and stones were still falling in great quantity, he went to the observatory's roof to gather specimens. When the fall had ceased, he rushed to measure its depth and fell eagerly to speculating why "a great quantity of coleoptera" (a species of insect) had assembled on the ashes and lapilli.

Indeed, the entire time that he was shut in the observatory he was busy noting the various phenomena of the eruption from every possible viewpoint. Before he was surrounded by the two torrents of fire he went hither and yon over the volcano, studying the lava streams and venturing as close to the crater as the heat and lava would permit him. On the night when lava, issuing from a great fissure in the Atrio del Cavallo, overwhelmed a number of sightseers, he tried to dissuade parties from going up the mountain beyond the observatory; but he himself left the observatory at 7 o'clock and did not return until the early hours of the following morning, when he was distressed to find dead and dying sightseers in the observatory.

Eight Hundred Feet Into the Crater.

It has truly been said that Palmieri was "the familiar spirit of the volcano." He apparently had no dread of it in the slightest degree. Indeed, the eruption of 1872 was barely over before he made his way to the crater, taking along with him his portable bifilar electrometer, an instrument of his own invention, for studying the electricity in the Vesuvian smoke clouds.

He found the crater divided by a great wall. "The two abysses had vertical sides, and revealed the internal structure of the cone. Their vertical depth was 250 meters, and beyond that I observed a sort of tunnel perforated in the rock, with a covering arch raised above the bottom of the eastern abyss about twelve meters, judging by the eye. * * * Various fissures about the brim of the double crater indicated prolongations downward, which allowed me to descend with a rope, in order to examine the interior of the tunnel."

Just a matter of 820 feet into a hole that a short while before had been belching fiery and suffocating death and destruction all about! Palmieri often descended into the crater. He gave no more thought to such a trip than the average person gives to the most ordinary duties of humdrum everyday life.

Men, observing an eruption of Vesuvius from a safe distance, have written of some of its phases in flowery strain. Palmieri, hemmed in by the awful phenomena of a grand eruption, beheld them with a poet's soul.

"The smoke, driven up with violence, assumed the usual aspect of a pine tree, of so sad a color that it reminded us of the shadowy elm of Virgil's dreams ('ulmus opaca ingens')." To him the lavas bearing threateningly down upon him, surrounding him, making him swelter in stifling heat and struggle for breath, were "splendid." And, later on, the wall that divided the crater was "cyclopean."

Yet, for all his daring and the decades that he spent on Vesuvius in the name of science, Palmieri went to his grave bearing only one mark—and that a slight one—of his pet's fury. He had the fore part of the hair of his head burned off, and was bald thereafter. "I had to sacrifice something for living in so hot a place," was his humorous explanation of his partial baldness.

Palmieri's Brave Guard.

Palmieri was much averse to having any one run the same risks that he ran. During the eruption of 1872 bands of brigands overran the stricken region, and that Palmieri might not be disturbed, the Government dispatched two carabineers to him, to act as a guard. When they presented themselves at the observatory Palmieri insisted on their leaving at once, saying that he did not care to put their lives in jeopardy. The carabineers retorted that if they were not permitted to remain they would certainly take the professor with them to the city. To be compelled to leave his post was the thing furthest from Palmieri's mind, so he was forced to share his threatened roof with the brave guard.

It must not be supposed from the foregoing that Palmieri was altogether free from concern while the eruption was taking place. Two things caused him much uneasiness. One was that as he had only one assistant, the instrument could not be watched as closely as he desired. He especially lamented the fact that he could not communicate with his beloved Naples, at the most critical period, and so contradict the alarming and baseless rumors that he knew, from past experience, were being circulated to the unalloyed fright and panic of many persons.

Palmieri was seemingly fitted by nature to study her most famous volcano. From early boyhood he evinced a lively interest in natural science. This and philosophy were his studies at the University of Naples, and later on he had a private school in which he taught philosophy and physics to 400 students. Next, he was professor of mathematics at the lyceums of Salerno, Campobosso and Avellino, successively. In 1845 he was made professor of physics in the Royal School of Marine, Naples. After two years he was appointed a professor in the university, and seven years later, when he began the great work of his life, at an age when most men shrink from assuming new tasks, he was nationally famed as an astronomer.

While he lived, all Italy could not boast of a more profound scholar. He wrote Latin and Greek grammars, a history of Greece, a history of Italian literature, a history of Fiacchio, where he was born on April 22, 1807, besides text books on physics and mathematics, a two-volume work on the Elements of Philosophy, for use in colleges, and scores of memoirs on various branches of physics, electricity, magnetism and meteorology being among them. Between 1842 and 1872 he produced no less than forty such memoirs. He was indefatigable in his researches, and that is one reason why he has contributed more than any other man to the volcanic knowledge of the race.

The First Citizen of Naples.

During the greater part of the forty and more years that Palmieri spent measuring Vesuvius inside and out, calculating the amount of lava it had ejected, and studying it in every way he could conceive, he was easily the first citizen of Naples.

Early in his work on the volcano, he invented the seismograph, a delicate mechanism that catches the slightest tremor of the volcano. Hence, he was able to predict with remarkable accuracy every fresh outbreak of his pet, and the fulfillment of his first predictions and his reassuring messages in times of apprehension speedily won him a sure place in the hearts of all Neapolitans.

While the eruption of 1872 was in progress, the observatory, surrounded by fire, could frequently be seen from Naples, and on every hand prayers were heard for the safety of the intrepid scientist penned within. When a great ball of smoke was seen to spring, apparently from the ground and right by the side of the observatory, many of the onlookers, thinking that Palmieri's end had at last come, burst into uncontrollable weeping.

The worst day of the eruption was on Friday, April 26. The following Friday the professor descended into the city, that he might lecture to his class the next morning on the more important of the phenomena he had observed and studied. The city had learned that he was to do this, and long before dawn of Saturday morning, thousands of persons began collecting in front of the hall where the lecture was to be given. Palmieri was plainly averse to facing such a multitude, and when it was suggested to him that he postpone his lecture until a hall, that would hold thousands instead of hundreds could be secured, he eagerly seized on the opportunity to lead a handful of his students back to the mountain shortly after daybreak. But they did not leave the city alone. Hundreds of enthusiastic Neapolitans, apprised of their hero's new move, fell in behind him and his young men and enthusiastically accompanied them the greater part of the way back to the observatory.

It was not until May 16 that the lecture was delivered. By that time the city had regained its wonted gaiety, all dread of Vesuvius had passed; nevertheless several thousand persons crowded into the hall to hear what Palmieri had to say about their destructive neighbor.

Palmieri was flooded with addresses from public bodies expressing their admiration and respect for the brave deed he had done for the sake of science. The King sent him the Grand Cross of St. Maurice and Lazarus, decorated him with Commendatore, and he was made a Senator for life. He took an ingenuous view of the encomiums and honors showered upon him.

"I am fearful," he told the King, "that the great honor you have conferred upon me may not tend to elevate me as it should, but may turn my head so that I shall not be able to progress in my further studies."

This "fine old fellow" had seen his four-score years when stricken with his fatal illness. He had been accustomed to having his little joke for four-score years and more, seemingly at the most inopportune times, and he was not to be deprived of it now.

"Doctor," he said, "you are a great physician. You have effected many wonderful cures. But I have observed that no physician has ever been able to cure the disease of which the patient dies."

When the news spread that Palmieri had breathed his last, the whole city mourned. When he was buried, the greater part of the city closed up shop and followed the funeral cortege to the grave. The Government's last honor to Palmieri was to order out a regiment to attend him on his final journey.

"Who will warn us now?" was a frequently repeated question in Naples. Immediately following Palmieri's death, The Neapolitants now know that Palmieri did not teach Matteucci the ways of Vesuvius in vain.

Duty of Educators.

In delaying the adoption of adequate records and accounts, educators, whether in New York or in other cities, must have overlooked the important fact that a system which fails to disclose weakness, inefficiency, and unsatisfied needs, must also conceal strength, efficiency, and progress; to oppose revision is, therefore, to deny a school system the privilege of proving its true worth and of securing the generous financial and moral support to which it is entitled. A searchlight directed upon every city from its educational headquarters, and from educational bureaus of the State and the Nation, will reveal social needs that otherwise escape notice; will, by prompt notice of children, families, and districts needing attention, materially strengthen every private and public child-saving agency and render the schools themselves more efficient in preventing ignorance, truancy, crime and dependence. One negligent New York truant officer, or one Philadelphia teacher who fails to tell of truancy because "the truant makes trouble," can manufacture work for a score of child-saving agencies; indifference to children illegally employed will furnish relief societies with clients for generations to come. If the highest purpose of the public school is to teach citizenship rather than scholarship, to develop moral, industrial, and civic efficiency, what better first step than for teacher and director to practice what they teach, and discharge their duty as trustees by rendering account of their stewardship in such a way as to make possible and necessary the hearty, because intelligent, co-operation of their community in support of every demonstrably sound, efficient school policy?—William H. Allen in the Review of Reviews.

Not Easy.

"Is he in easy circumstances?"

"Yes, and he got there by not being easy."—Houston Post.